



*Better Buildings Residential Network  
Peer Exchange Call Series*

*The Envelope Please...Lessons Learned from  
Home Performance with ENERGY STAR Award Winners*

*May 11, 2023*

# Agenda and Ground Rules

- Moderator
  - **Jonathan Cohen**, Better Buildings Residential Network, DOE Residential Buildings Integration Program (RBI)
- Agenda Review and Ground Rules
- Residential Network Overview and Upcoming Call Schedule
- Opening Poll
- Featured Speakers
  - **John Karyczak**, Avangrid
  - **Jonathan Waterworth**, Arizona Energy Efficient Home
  - **Robyn King**, Efficiency Vermont
- Open Discussion
- Closing Poll and Announcements

## Ground Rules:

1. **Sales of services and commercial messages are not appropriate** during Peer Exchange Calls.
2. Calls are a safe place for discussion; **please do not attribute information to individuals** on the call.

*The views expressed by speakers are their own, and do not reflect those of the Dept. of Energy.*

## Join the Network

### Member Benefits:

- Recognition in media, social media and publications
- Speaking opportunities
- Updates on latest trends
- Voluntary member initiatives
- One-on-One brainstorming conversations

### Commitment:

- Members only need to provide *one number*: their organization's number of residential energy upgrades per year, or equivalent.

### Upcoming Calls (2<sup>nd</sup> & 4<sup>th</sup> Thursdays):

- *5/25: How are Efficiency Programs and Partners Preparing for Inflation Reduction and Infrastructure Act Funding?*
- *6/8: Marketing Residential Energy Efficiency in the Era of IRA (the Inflation Reduction Act)*

Peer Exchange Call summaries are posted on the Better Buildings [website](#) a few weeks after the call



**John Karyczak**  
*Avangrid*

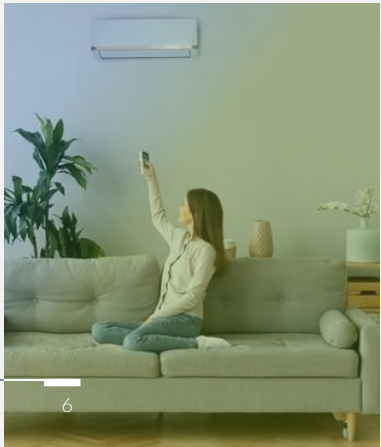
# Energize CT: Home Energy Solutions

*Better Buildings Residential Network: The Envelope Please ... Lessons Learned from Home Performance with ENERGY STAR Award Winners*

John J. Karyczak

May 11, 2023





energize  
CONNECTICUT



# Energize CT

## Energy Solutions for Customers

- | Energize Connecticut is implemented by Eversource, Connecticut Natural Gas, Southern Connecticut Gas, and United Illuminating .
- | Energize CT is a partnership of the Connecticut Energy Efficiency Fund, the Connecticut Green Bank, the State, and local electric and gas utilities.
- | In united partnership, the shared mission is to provide Connecticut residents and businesses the resources they need to save energy and use clean energy.
- | The Energize CT initiative empowers communities to make smart energy choices, now and in the future.



# Energy Efficiency Matters

**Save Energy, Save Money, Increase Comfort**

Energy  
Efficiency **for  
the customer**

## **Energy**

Reducing consumption should be the first step in efficiency

## **Money**

Reduced consumption inherently reduces utility costs

## **Comfort**

When energy is used correctly, comfort ensues

Energy  
Efficiency **for  
the world**

## **Sustainability**

Reduces air pollutants and greenhouse gases

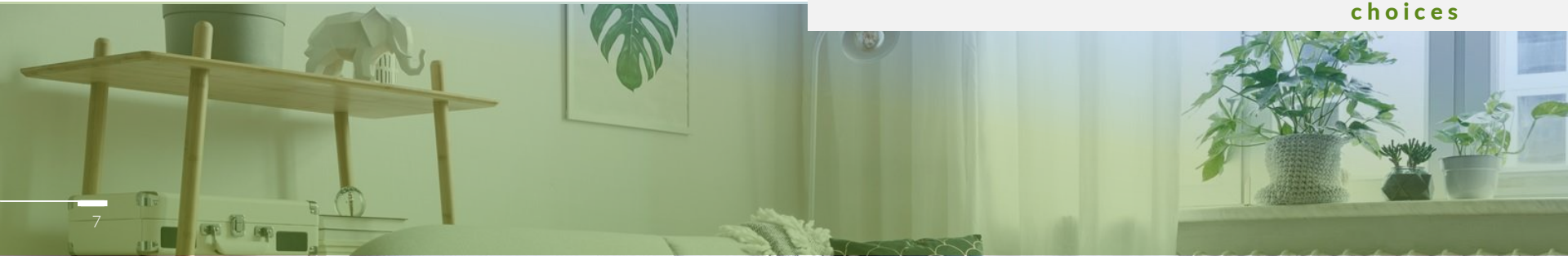
## **Workforce**

Sustainability jobs are in high demand and increasingly lucrative

## **Community**

Benefits are not singular, they are shared

**Empowerment to make smart energy choices**



# Energy Efficiency in CT

## Why we do what we do

### 2022 Savings Residential



**Financial Savings**  
\$30.8 Million annually  
\$505 Million lifetime



**Energy Savings**  
Electric: 56 Million kWh  
Gas: 3.1 Million CCF  
Oil/Propane: 2.5 Million Gal

### 2022 Impact Residential



**Project & Rebates**  
488,867 engaged customers



**CO2 Emissions**  
68,000 Tons annually  
1.2 Million lifetime

## 2022 Key Program Benefits

<b>Financial</b>	Every <b>\$1.00 collected</b> , results in an additional <b>\$4.71 of clean energy investment</b> .
<b>Workforce</b>	<b>43,028 jobs in 2022</b> – clean energy investment support Connecticut jobs in HVAC, electrical, manufacturing, insulation, weatherization, and solar industries.
<b>Energy Savings</b>	<b>Energy savings equivalent to a 59 MW power plant.</b> That is enough to power approximately <b>33,402 homes</b> .
<b>Sustainability</b>	<b>\$3.8 Million in public health care costs saved</b> due to lower CO <sub>2</sub> emissions.

- Energy efficiency is the lowest cost energy resource.
- At an average of 7 cents/kWh, it is less expensive to save energy through Connecticut's existing award-winning efficiency programs than it is through any other means.
- Together, we are committed to make Connecticut a better place to live and work.



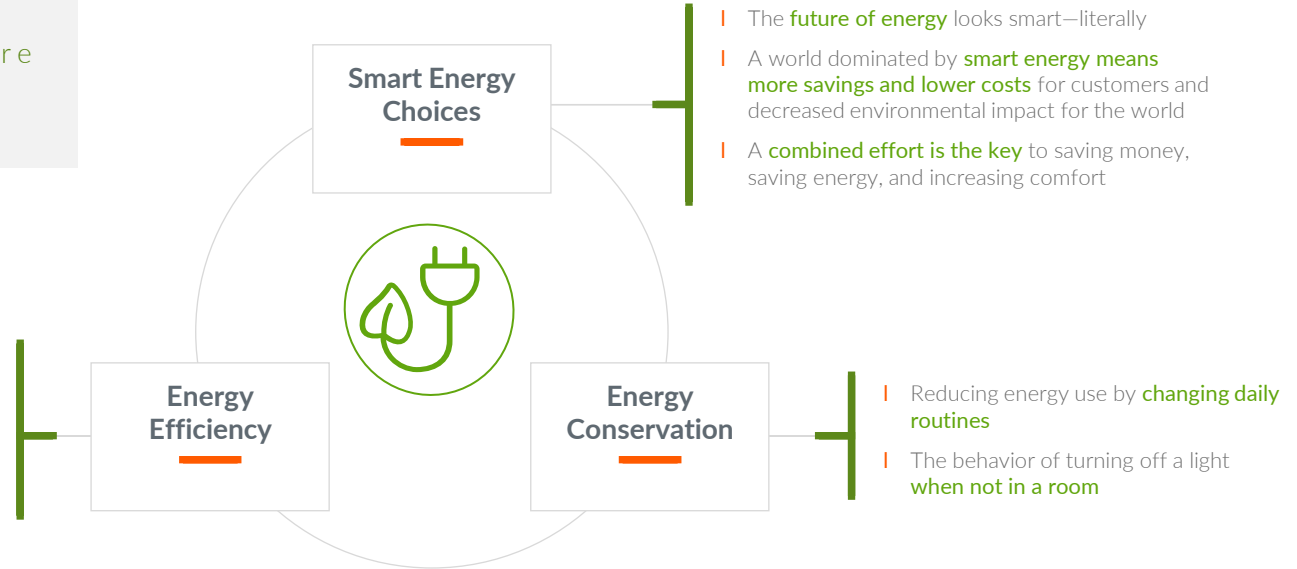


# Equating Smart Energy Choices

**Energy efficiency** and **energy conservation** are necessary for **optimal savings**

- | The **future of energy** looks smart—literally
- | A world dominated by **smart energy means more savings and lower costs** for customers and decreased environmental impact for the world
- | A **combined effort is the key** to saving money, saving energy, and increasing comfort

- | **Install equipment and systems** that perform and use less energy
- | LED lighting which uses up to **90% less energy** than an incandescent light bulb



- | Reducing energy use by **changing daily routines**
- | The behavior of turning off a light **when not in a room**



# Home Energy Solutions<sup>SM</sup>

## MAKING A HOME ENERGY SMART

**A smart energy home is about more than just “energy”. It’s comfort. Convenience. The health of one’s family. A home to value more...**

- Home Energy Solutions is an award-winning residential energy efficiency program available to help customers save money and energy while increase comfort in your home.
- An in-depth home performance assessment and service saves the average customer around \$200 each year in energy bills and can reduce their energy costs even further if they take advantage of additional opportunities.
- Home Energy Solutions will make a customer's house, condo, or apartment more comfortable in both the winter AND summer months.



### Increase Efficiency

**In-home assessments**  
On-the-spot improvements



### Optimize Comfort

**Well-being all season**  
Consistent temperatures



### Deeper Savings

**Balanced consumption**  
Manageable utility bills

# Home Energy Solutions<sup>SM</sup>

Home Energy Solutions services are offered at a low \$50 copay. No cost for income eligible customers. The work completed during the visit would cost an average of \$1,000.

Multifamily units (5+) qualify for the same services as well as comprehensive projects to include deeper measures. Incentives are based on projected energy savings.

Services from utility-approved, certified contractors: BPI, DOE, EPA



In-home weatherization services: air and duct sealing, installing hot water pipe wrap, faucet aerators, and low-flow showerheads



Deeper measure rebates for customers: Insulation, Windows, Appliances, and Heat Pumps



EVERY CUSTOMER PAYS INTO THE ENERGY EFFICIENCY FUND THAT SUPPORT ENERGIZE CT PROGRAMS THROUGH A SMALL CHARGE ON ELECTRIC AND NATURAL GAS BILLS, SO EVERYONE IS URGED TO PARTICIPATE IN SOME WAY.

Blower door-guided air sealing

Duct sealing

Home Energy Report & Home Energy Score

Water-saving measures

Health and safety tests on heating equipment (e.g., oil boiler, gas furnace)

Hot water pipe wrap



Reduced costs on your energy bills

Less pollen, dust and pests entering your home

Reduced noise from outside

Better humidity control, minimizing mold and mildew

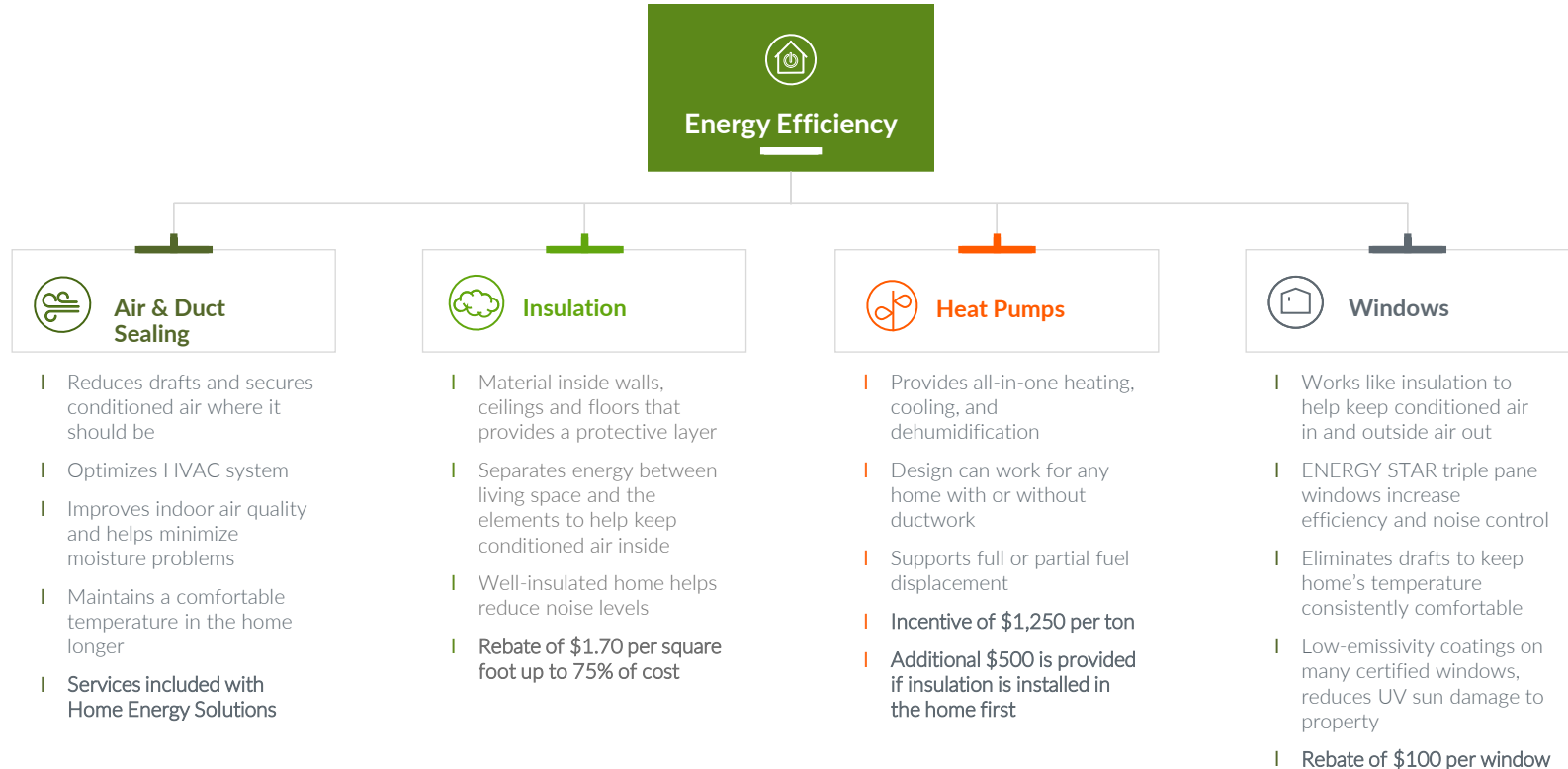
Access to special rebates

Lower chance for ice dams on your home's roof/eaves

A less drafty, more comfortable home year-round

# Home Energy Solutions<sup>SM</sup>

The process of making one's home better protected against the effects of uncomfortable outdoor temperatures.



# Energize CT

EnergizeCT.com

877-947-3873



Empowering you to make  
smart energy choices



# John Karyczak

*Home Energy Solutions Program Manager*

jkaryczak@uinet.com

203-710-6377



Part of the AVANGRID Family



Thank you!





**Jonathan Waterworth**  
*Arizona Energy Efficient Home*



## **“The Envelope Please”**

**Jonathan Waterworth**

**President at AZ Energy Efficient Home**

**Phoenix, Az.**



## Introduction

Homeowner has extensive knowledge in Residential building Inspection/ Construction and sought us out to help achieve a high-performance efficient home with the goal of achieving Net Zero.





## Project Agenda



- Site Inspection/ Test In
- Customer Intent/ Scope of work
- Execute Plan
- Measure Performance/ Test Out



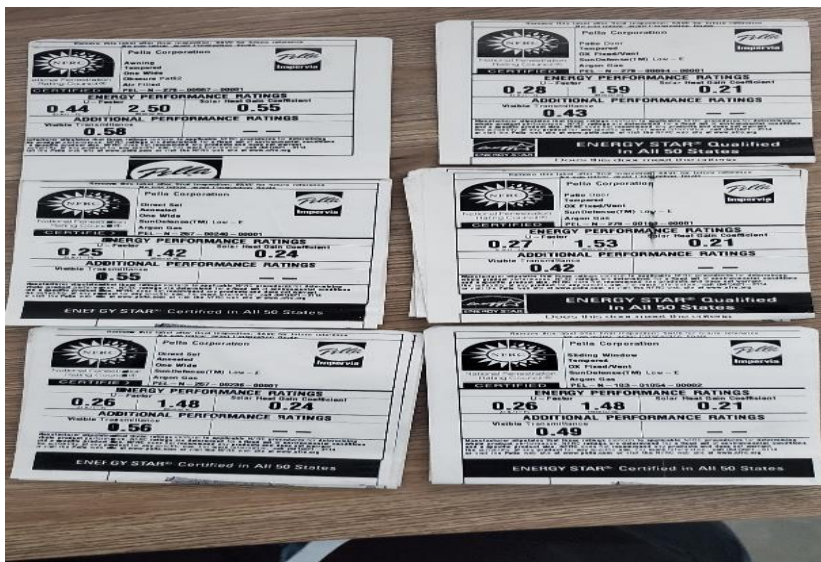


**T-111 siding over R-13 Rockwool batt +  
Housewrap + 2" Polyiso board + Stucco  
w/synthetic finish.**



# Windows

Replaced clear single pane w/aluminum frames to Dual pane Low-E Argon filled fiberglass frames.



"The Envelope Please"

AZEEH

20



## Before

- 1777 Sq. Ft. home located in Sun City West, Az.
- Built in 1984 with 2x4 construction and T-111 siding.
- All Electric home.
- 8.5 ACH.
- 144 cfm25 Duct leakage.
- R-13 walls / R-22 Attic.
- Has a 3.6 kw PV Solar array

## After

- Interior/Exterior Remodel with a focus on Energy Efficiency, Comfort and Indoor Air Quality.
- Improved Thermal Performance, R-25 walls / R-60 attic.
- Reduction in Infiltration.(3.5ACH)
- Improved HVAC distribution design/performance.
- High efficiency windows.
- New efficient Heat Pumps HVAC/DHW.

# Table

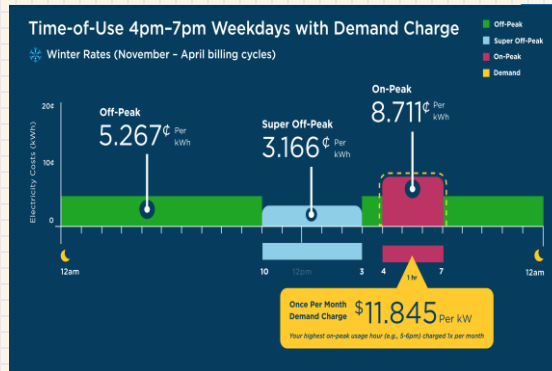
Insulate attic	R=20.0	R=80.0	☑	Touch Up - Insulate to an R-60 with premium blown fiberglass; Knee wall, attic hatch, sk	4.3%	\$116
<b>Air seal / vent</b>	2149 CFM	860 CFM	☑	Air Seal registers and all available attic penetration	1.1%	\$46
Insulate walls	R=13.0	R=25.0	☑	Increase wall insulation to save energy and increase comfort.	3.6%	\$94
Doors	U=2.08	U=0.41	☑	Add storm door(s) or install new door(s) to save energy and increase comfort.	4.9%	\$256
Windows	U=1.10, SHGC=.75	U=0.42, SHGC=.31	☑	Replace windows	7.7%	\$176
Thermostat	Heat-74° Cool-74°	Heat-72° Cool-78°	☑	Install EcoBee 3 thermostat	18.3%	\$679
Duct/Pipe Eff	Eff=73%	Eff=96%	☑	Duct Seal unit, system & cans to reduce leakage & improve comfort/savings	10.1%	\$303
<b>Heating + Cooling</b>	6.8 HSPF, 10 SEER	8.5 HSPF, 17 SEER	☑	Improve the efficiency of your heating and cooling system to save energy.	9.1%	\$220
• Heat+Cool 1	Eff=199%, 10 SEER	Eff=249%, 16 SEER		Improve heating and cooling system 1	9.1%	\$220
Lighting	11 CFLs, 22 LEDs	0 CFLs, 43 LEDs	☑	Replace other incandescent lights with CFLs to save energy and replacement costs.	2.0%	\$58
Hot water temp	130 Deg.	122 Deg. + Timer	☑	WiFi Timer - Lower your hot water temperature to reduce energy losses and increase sa	-0.0%	\$13
<b>Water heaters-all</b>	EF = .91	EF = 3.63	☑	Improve the efficiency of your water heating system to save energy.	6.3%	\$171
• Water heater 1	EF = .91	EF = 3.63		Improve water heater 1	6.3%	\$171
<b>Package Total</b>				<b>Total for all Energy Improvements</b>	67%	\$2,133

# Reduce Load & Shift!

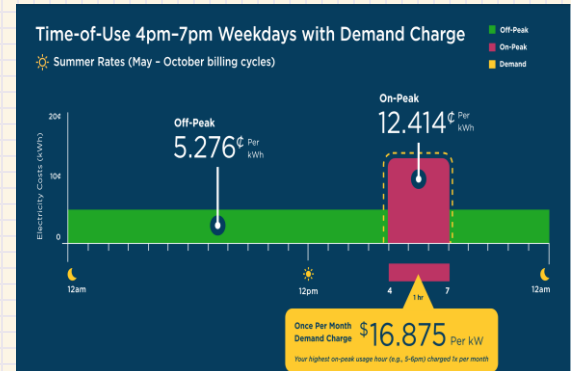
## Smart Meters



## Winter Demand Rate



## Summer Demand Rate



# Load Shifting HVAC Heat Map

Measures	MBtu / Yr	Save / Yr	% Save	CO2 (MT/yr)	% CO2 Save	Cost	Save Yr 1	Pay Back Yr	PV Savings	SIR	MIRR	Add
Thermostat	0	4.6	calc	0.0	6.5%	\$240	\$250			calc		<input checked="" type="checkbox"/>
<b>Selected</b>	10	61.4	85.8%	1.4	85.8%		\$2,057				-	

## ▼ Thermostat Improvement Costs Base

Improved

SIR / MIRR   Save MBtu  Use Imp ☒ Calc

Total Cost \$  Bid... Override? ☒ \$

## ▼ Thermostat - Heating Base

Improved

Type

Temp 1 (F°)  Start

Temp 2 (F°)  Start

Temp 3 (F°)  Start

Temp 4 (F°)  Start

Type

Temp 1 (F°)  Start

Temp 2 (F°)  Start

Temp 3 (F°)  Start

Temp 4 (F°)  Start

## ▼ Thermostat - Cooling Base

Improved

Type

Temp 1 (F°)  Start

Temp 2 (F°)  Start

Temp 3 (F°)  Start

Temp 4 (F°)  Start

Type  Pre/Maintenance Cooling...

Temp 1 (F°)  Start

Temp 2 (F°)  Start

Temp 3 (F°)  Start

Temp 4 (F°)  Start

## Proposed Usage

### Hourly Average kW

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Demand
																									b
Jan	0.79	0.63	0.60	0.62	0.67	0.71	0.86	1.00	0.74	0.59	0.63	0.69	0.67	0.65	0.65	0.60	0.77	0.96	0.97	1.03	1.34	1.09	1.03	0.93	1.44
Feb	0.81	0.65	0.62	0.68	0.71	0.76	0.90	0.96	0.76	0.63	0.62	0.69	0.67	0.64	0.64	0.59	0.75	0.93	0.94	1.05	1.41	1.23	1.14	1.08	1.86
Mar	0.42	0.26	0.27	0.29	0.40	0.48	0.61	0.55	0.48	0.52	0.57	0.63	0.66	0.74	0.84	0.98	1.14	1.18	0.88	0.86	1.16	0.85	0.71	0.56	1.85
Apr	0.38	0.24	0.24	0.24	0.29	0.40	0.44	0.41	0.47	0.52	0.57	0.75	0.90	1.44	1.85	1.67	1.68	1.52	0.91	0.80	1.12	0.85	0.71	0.56	2.04
May	0.39	0.22	0.17	0.14	0.16	0.22	0.30	0.46	0.87	1.13	1.41	1.79	4.13	2.96	2.34	0.53	0.66	0.79	0.77	0.76	3.08	0.98	0.79	0.63	0.79
Jun	0.47	0.28	0.19	0.13	0.15	0.18	0.38	0.72	1.15	1.65	1.95	2.16	4.21	3.39	2.55	0.50	0.61	0.73	0.71	0.71	4.46	1.51	0.88	0.70	0.73
Jul	0.70	0.49	0.40	0.31	0.31	0.31	0.67	1.17	1.65	1.97	2.16	2.36	4.31	3.74	2.85	0.50	0.62	0.73	0.71	0.71	4.63	2.40	1.19	0.92	0.73
Aug	0.68	0.48	0.41	0.33	0.30	0.29	0.53	1.01	1.45	1.88	2.09	2.30	4.32	3.54	2.65	0.50	0.62	0.74	0.72	0.72	4.62	1.79	1.10	0.90	0.74
Sep	0.45	0.29	0.24	0.19	0.17	0.18	0.30	0.57	0.92	1.52	1.93	2.18	4.33	3.23	2.41	0.50	0.62	0.74	0.74	0.76	2.93	0.97	0.81	0.64	0.76
Oct	0.36	0.23	0.17	0.16	0.15	0.20	0.30	0.44	0.53	0.52	0.95	1.76	3.44	2.46	1.93	0.53	0.67	0.82	0.82	0.83	1.90	0.86	0.75	0.58	0.82
Nov	0.45	0.37	0.42	0.47	0.53	0.58	0.70	0.68	0.50	0.52	0.57	0.62	0.60	0.63	0.71	0.65	0.94	0.89	0.88	0.83	1.13	0.81	0.67	0.59	1.33
Dec	0.85	0.75	0.71	0.69	0.73	0.77	0.92	1.01	0.73	0.59	0.63	0.70	0.67	0.65	0.65	0.61	0.79	0.99	0.98	0.97	1.32	1.10	1.03	0.94	1.52



# Thank you

JONATHAN WATERWORTH | JONATHAN@AZENERGYEFFICIENTHOME.COM  
| WWW.AZENERGYEFFICIENTHOME.COM



**Robyn King**  
*Efficiency Vermont*



# Efficiency Vermont Intro

- Statewide energy efficiency utility covering thermal and electrical efficiency upgrades through incentives and technical assistance
- One of three energy efficiency utilities in Vermont
- Funding from an Electric Efficiency Charge, Regional Greenhouse Gas Initiative (RGGI) and ISO New England
- Delivers market-rate (above 80% of Area Median Income) weatherization programming for single-family homeowners



# Program Focus Areas

- Commercial
  - New Construction
  - Existing Facilities
- Residential
  - New Construction
  - Existing Homes
  - Efficient Products
- Cross-sector services
  - Education and Engagement
  - Contractor network
  - Financial Services
  - HVAC
  - Electric Transportation
  - Research and Development



# The economic value of efficiency

Efficiency comprises over 15% of VT's electric portfolio, delivered at 75% of the cost of purchasing new power.



15.1%

Percentage of Vermont's 2021 electric needs met by efficiency



5.32¢/kWh

Cost of saving electricity  
with efficiency



7.4¢/kWh

Cost of supplying  
electricity

VS



\$13.00/MMBtu

Cost of saving fossil fuel  
with efficiency



\$23.55/MMBtu

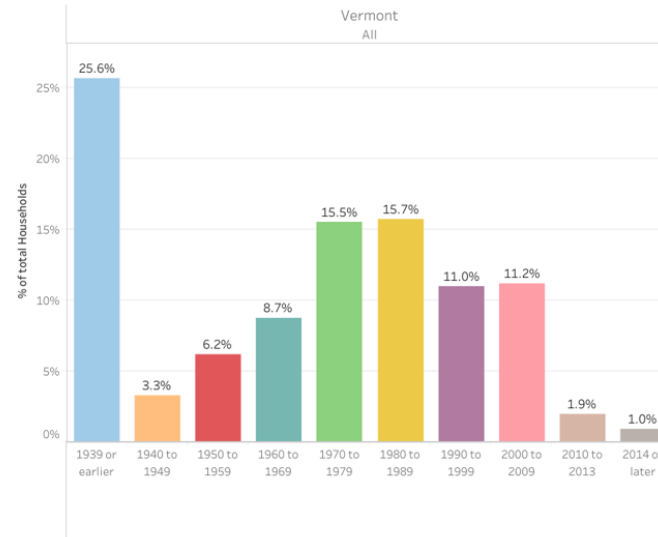
Cost of supplying  
fossil fuel

VS

# The Vermont Landscape

75% of the housing stock was built before 1989

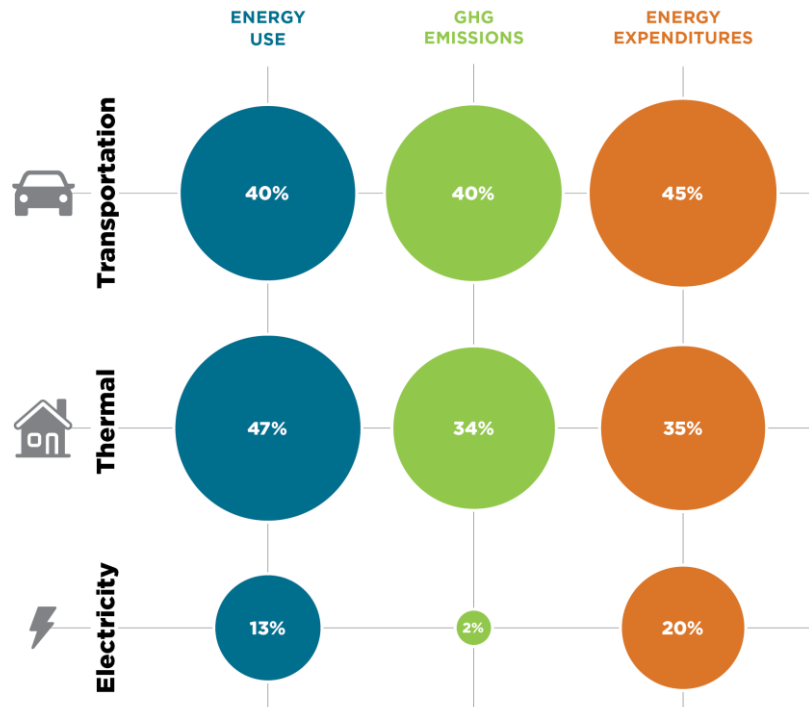
Estimated housing units by year structure built



Source:

U.S. Census Bureau: American Community Survey 5-year estimates (Table B25034, B25036), 2014-2018

# The Vermont Landscape



Source for Energy Use: Thermal and transportation based on EIA 2019 site energy; electricity from PSD site energy, after accounting for RECs.

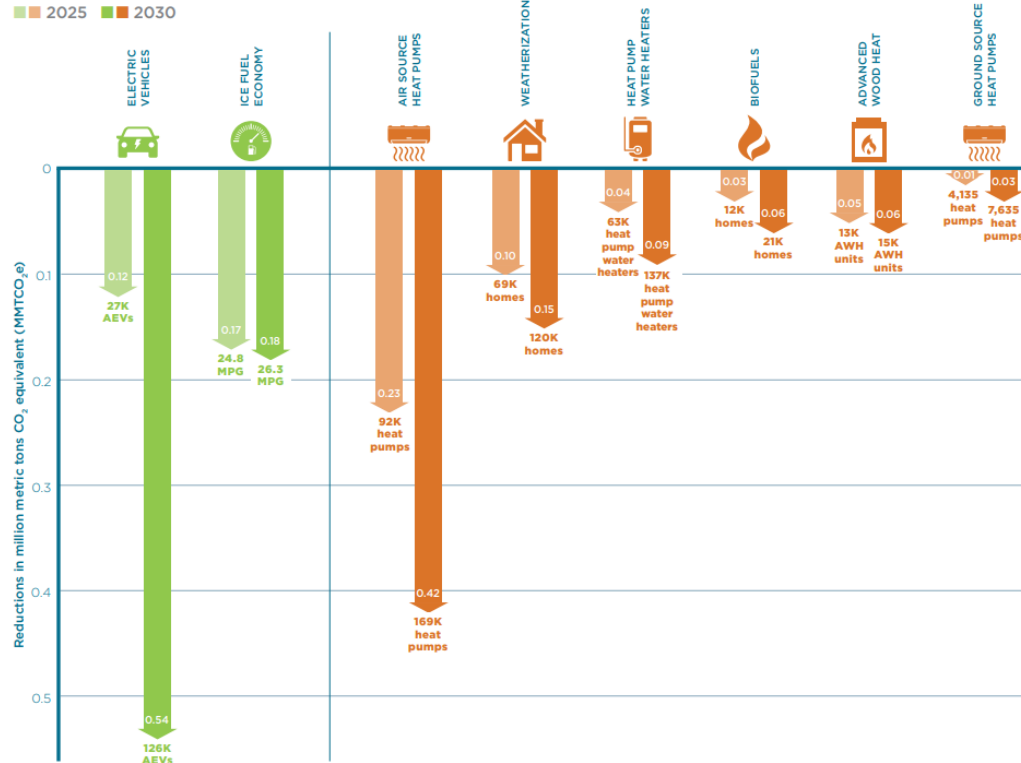
Source for Emissions: VT Agency of Natural Resources, 2021 GHG Emissions Inventory, 1990-2018.

Source for Energy Expenditures: Vermont Energy Burden Report, VEIC (October 2019).



# The Vermont Landscape

## Pathways emissions reductions, 2025 and 2030





# The Vermont Weatherization Landscape

1

Significant investments in weatherization via ARPA funding

2

Acute contractor constraints given workforce shortages

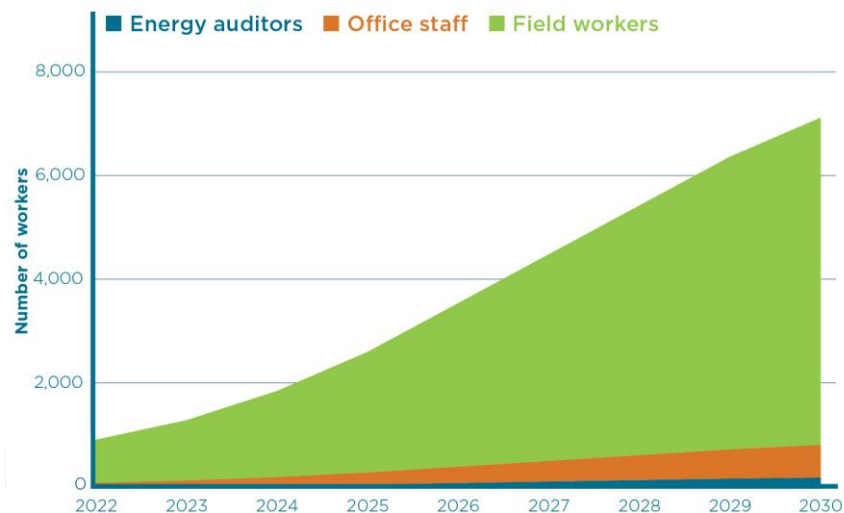
3

Projects increasing in complexity

# The Vermont Weatherization Landscape

Weatherization workforce needs to grow significantly

## Projected workforce need to meet CAP weatherization target

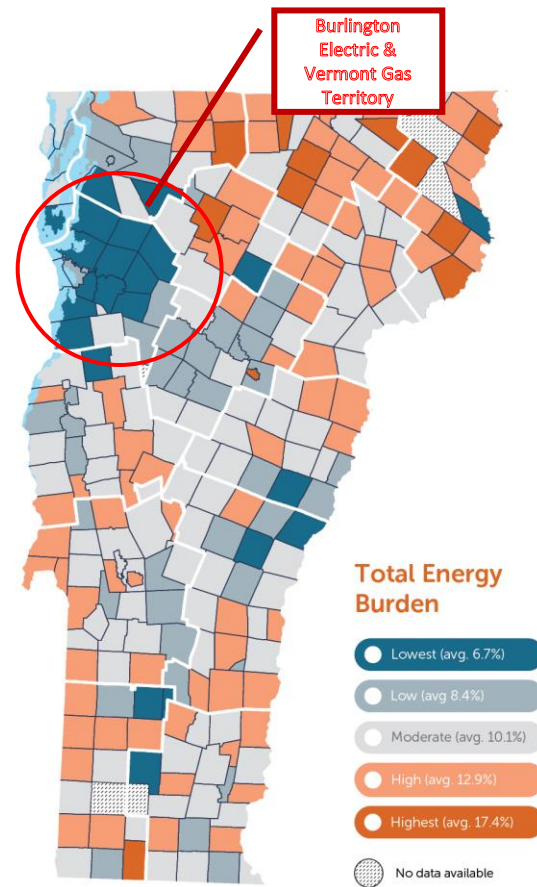


**Source:** Weatherizations ramp up rate from Cadmus/EFG, Vermont Pathways Analysis Report 2.0, 2022. Workers per weatherization range from EAN Intern Raquel Smith, "Workforce Development in Vermont's Thermal Sector," 2021.



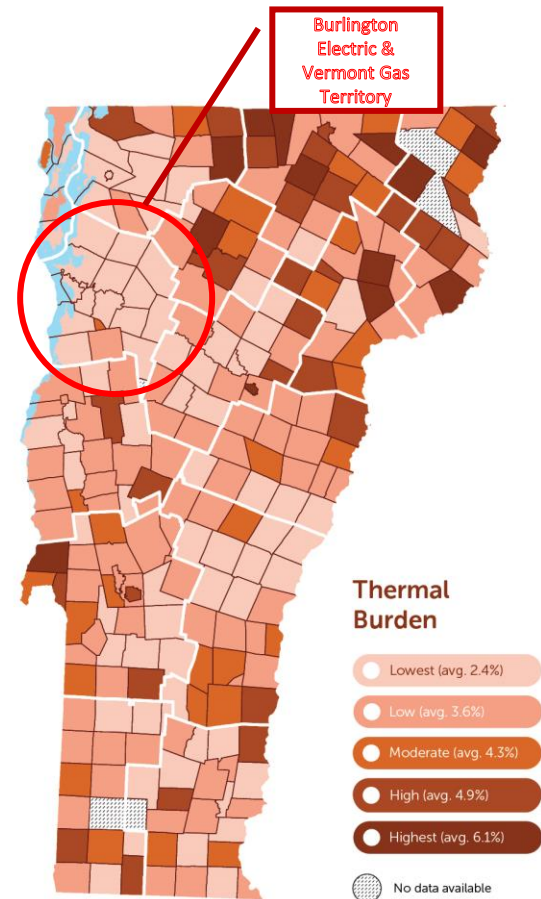
# The Vermont Weatherization Landscape

## 2019 Energy Burden Report



# The Vermont Weatherization Landscape

## 2019 Energy Burden Report



# What we've learned throughout the years



No program is an island – partnerships are key in reaching historically excluded communities and market segments



Know your markets, but more importantly know your customers



Don't let perfect get in the way of great

# What we've learned throughout the years



No program is an island – partnerships are key in reaching historically excluded communities and market segments



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Don't let perfect get in the way of great

# Community Engagement

- Focused efforts (with staff resources and tailored programming) in select communities in partnership with utilities, non-profits, local development organizations, and local government
- Communities selected on metrics associated with energy burden, historical exclusion, and community needs
- Annual statewide campaign (Button Up Vermont) focused on weatherization

Efficiency  
Vermont





# Contractor Partnerships

## Efficiency Excellence Network

- 482 contractors providing efficiency-related services (i.e. lighting, heat pumps, etc.)
- 61 Home Performance with ENERGY STAR® contractors
- Encouragement of contractor partnerships between BPI-certified and non-certified companies
- Programs supporting more contractor reach in under-resourced areas
- Certification support, workforce development, technical assistance and guidance



# Common HPwES Contractor Business Models

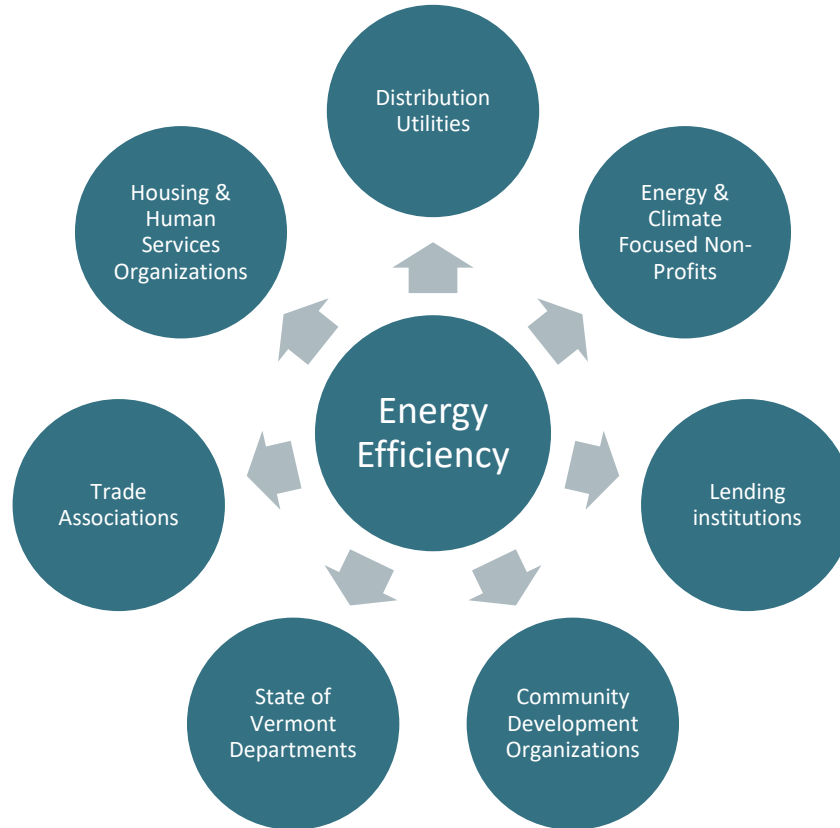
## “Contractor”

- Offers testing, installation in-house
- May offer multiple types of energy efficiency improvements

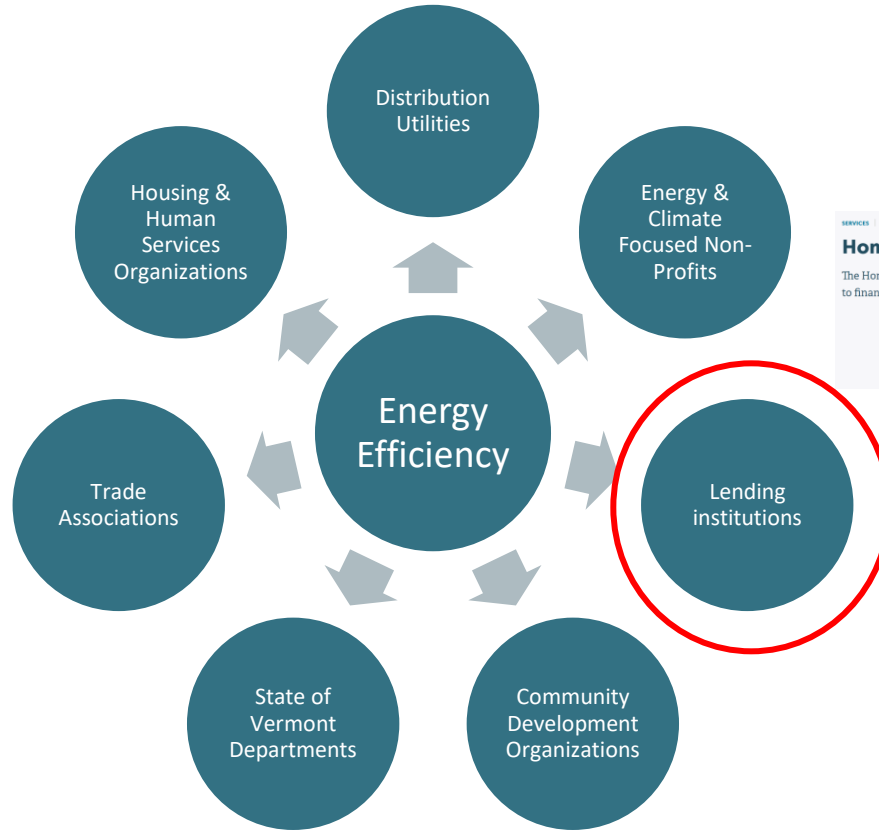
## “Auditor”

- Pairs with in-network and out-of-network contractors
- Conducts testing, scoping, and reports the project

# Statewide Energy Stakeholders



# Statewide Energy Stakeholders



SERVICES FINANCING FINANCING FOR HOMEOWNERS

### Home Energy Loan

The Home Energy Loan is a fast, easy, and flexible way to finance home energy projects.

- 0% interest financing for low and moderate income Vermonters.
- Finance 100% of your project up to \$20,000.
- Can be processed in as little as two business days.
- Low fee: no closing costs (can be rolled into loan), loan terms of up to 15 years.

[Download Form](#) [Find a Contractor](#) [Contact Us](#)



# What we've learned throughout the years



No program is an island – partnerships are key in reaching historically excluded communities and market segments



Know your markets, but more importantly know your customers



Don't let perfect get in the way of great

# Market Research

## Early and often!

- Efficiency Vermont conducts annual brand surveys as well as research on specific offers and attitudes towards focus areas (like weatherization)
- The most recent research shows:
  - People are more comfortable in their homes in the winter than in the summer
  - Customers are aware of the weatherization process, but not as aware of impactful projects
  - Top motivations include: 1) Saving Money, 2) Saving Energy, and 3) Home Comfort
  - Cost and uncertainty are some of the greatest customer barriers
  - Vermonters prioritize weatherization over all other areas of Efficiency Vermont's work
- Renters and homeowners' attitudes can sometimes differ – important to look into specific segments and what their feedback means





# Events

- Efficiency Vermont staff at all levels across all departments make efforts to attend local events statewide, resulting in hundreds of customer touchpoints annually
- We leverage these opportunities to:
  - Get to know our customers better
  - Integrate feedback into program design
  - Establish brand awareness and affinity
  - Better understand systemic barriers
- Opportunity to deploy direct-to-consumer solutions (like Energy-Saving Kits)
- **Events are crucial for us to understand who we're serving, and what they're experiencing in an unfiltered way**



# Technical Assistance & Guidance

## Virtual Home Energy Visits

- Efficiency Vermont engineering staff provide free 1:1 guidance to customers who have energy questions
- Delivered virtually – on the phone or by virtual meeting
- High-level descriptions of how homes as a system work with tailored recommendations
- In 2022, we delivered over 500 unique visits to customers
- These visits allow us to better understand the customer need, and are open to both homeowners and renters



# What we've learned throughout the years



No program is an island – partnerships are key in reaching historically excluded communities and market segments

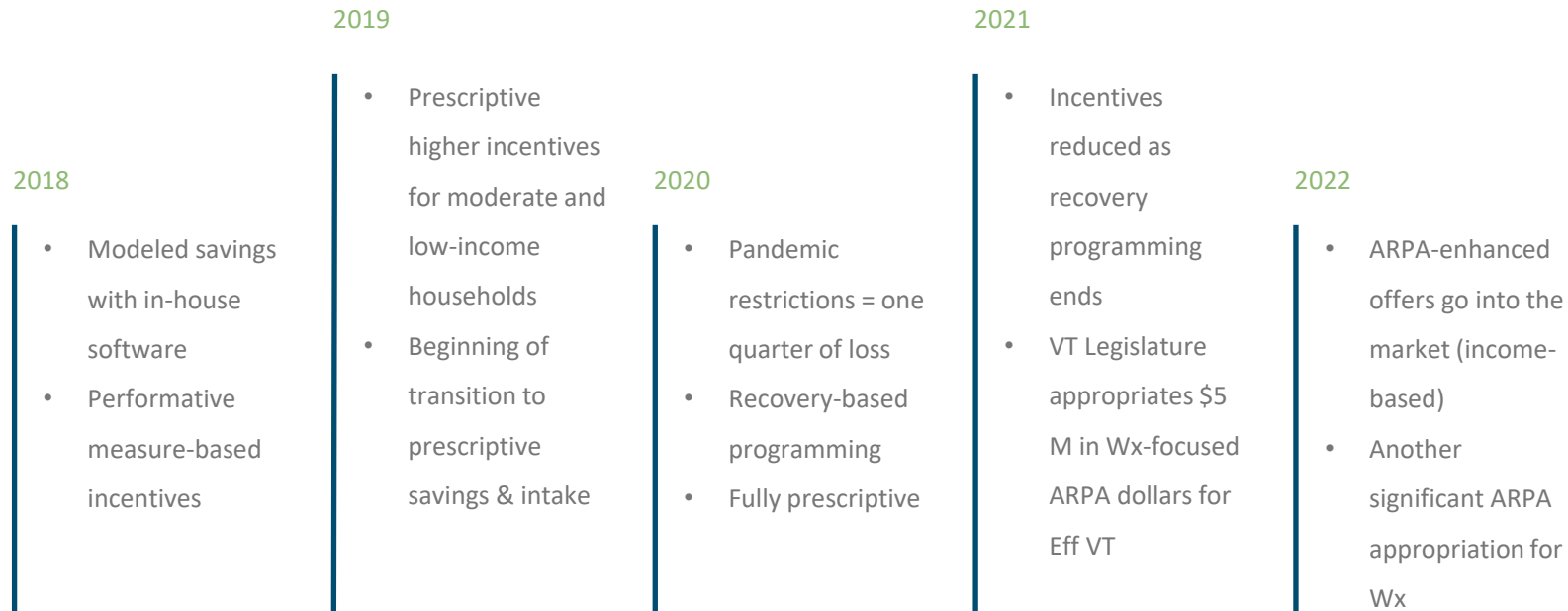


Know your markets, but more importantly know your customers

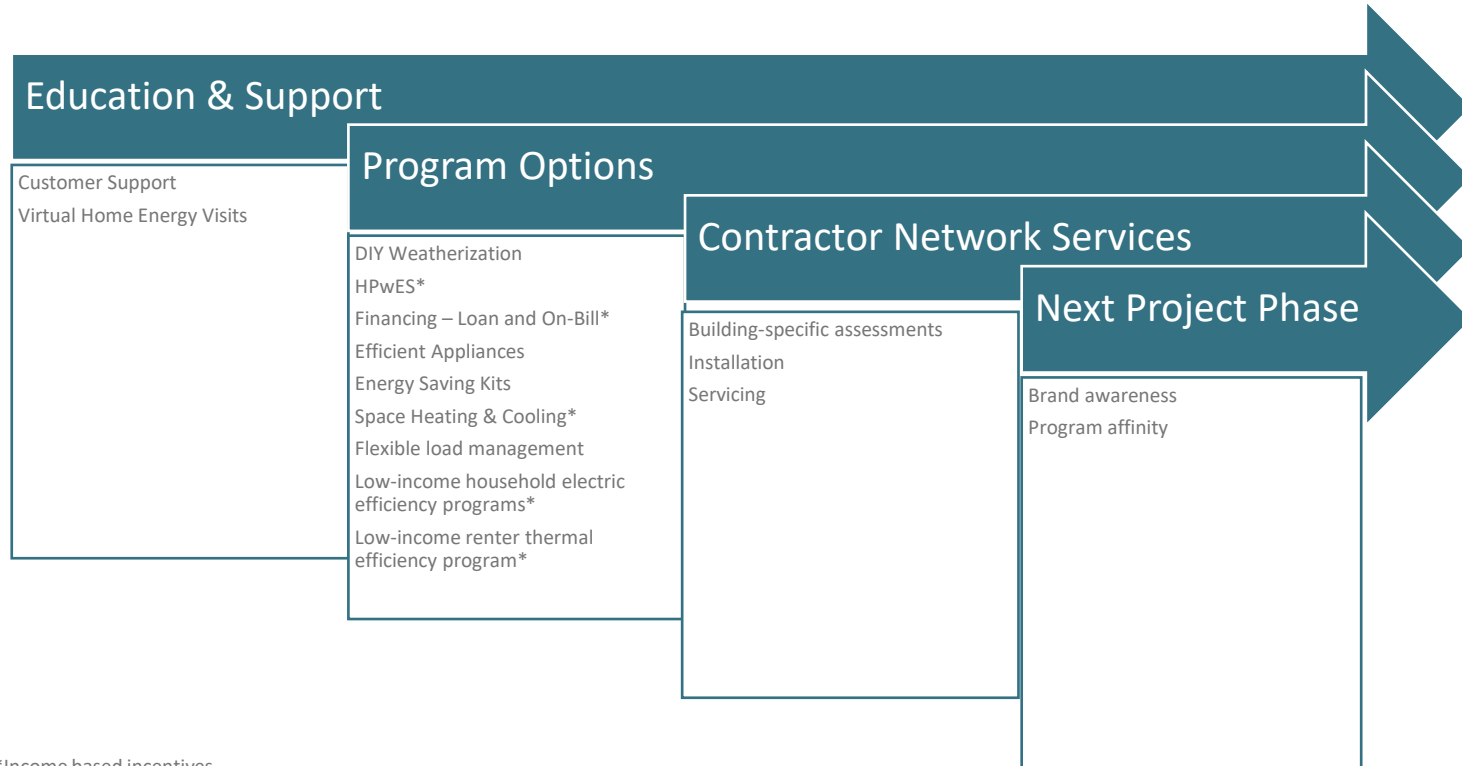


Don't let perfect get in the way of great

# Evolution of Weatherization-Focused Program Design



# The Customer Journey



\*Income based incentives



**“We don’t have to debate anymore! It’s just one question: do you want to turn on the heat pump? And the answer is yes!”**

Bill Sugarman, Barre



In 2010, Bill (a Manager for VocRehab) and his wife Nathalie (a social worker at Randolph Elementary) weatherized their home with an **Efficiency Excellence Network** contractor.

In 2021, after receiving a **Virtual Home Energy Visit** from Efficiency Vermont, they decided their next best step was to install a ductless heat pump.



# What the future holds...

## Electrification

- Orienting services to better enable customers to understand the benefits of weatherization and heating system upgrades (or water heating and appliances)

## Customer Intake 2.0

- Refined process in anticipation of federal funding
- Direct follow-up with income-eligible customers to play the role of energy liaison

## Recalibrating

- Continuing to adjust our systems and the way we interact with our customers to increase accessibility and inclusivity
- Deep work with partners to better understand their needs
- Update to Energy Burden report



# Thank you!



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# Smart Tools for Efficient HVAC Performance (STEP) Campaign



Scan this QR code to visit our website

Contact: [christian.valoria@pnnl.gov](mailto:christian.valoria@pnnl.gov)

The STEP Campaign aims to increase adoption of **smart diagnostic tools** to streamline HVAC system performance testing and troubleshooting, **reducing energy-wasting faults** and **improving occupant comfort**.

**To join the STEP Campaign, visit: [bit.ly/3DFmEaE](https://bit.ly/3DFmEaE)**



## HVAC Contractors and Technicians

- Reduce callbacks, improve consistency and quality, streamline processes
- Find out where to get training on smart diagnostic tools
- Be recognized for successful adoption of smart diagnostic tools!



## HVAC Training Organizations

- Offer qualified training on System Performance with smart diagnostic tools
- Promote your training events
- Be recognized for providing training!



## Utilities and Program Implementers

- Streamline quality installation and quality maintenance programs
- Improve engagement with your contractors
- Be recognized for programs that utilize smart diagnostic tools!



## Weatherization Organizations

- Ensure your ASHP/CAC installations are operating at optimized efficiency
- Develop pilot with PNNL team
- Be recognized!

## ORGANIZING PARTNERS

# Buildings UP

The Buildings Upgrade Prize

AMERICAN  
**MADE**  
U.S. DEPARTMENT OF ENERGY

Building capacity to transform U.S. buildings into energy-efficient and clean energy-ready homes, commercial spaces, and communities

Upgrading existing buildings to efficiently run on clean energy will help address climate change. This means transitioning **residential and commercial buildings** to efficient electric equipment, such as **heat pumps and heat pump water heaters**, and ensuring comfort with measures such as **insulation and air sealing**.

Teams participating in **Buildings UP** will develop innovative plans to leverage the billions of dollars through the Bipartisan Infrastructure Law, the Inflation Reduction Act, utility rebate programs, and many other funding sources available and capitalize on this unprecedented opportunity to improve our homes, businesses, and communities.

Buildings UP will award more than **\$22 million** in cash prizes and expert technical assistance to bring winning ideas to life.



[www.heroX.com/buildingsUP](https://www.heroX.com/buildingsUP)

## Form Your Team and Submit Your Application by July 2023!

- Community-based organizations
- Local governments
- Utilities
- Non-profit organizations
- For-profit energy efficiency companies
- and more!

*Multi-stakeholder teams are encouraged*

Application support available for new and under-resourced teams

Follow Buildings UP on HeroX for prize info and updates  
Questions: [buildingsUP@nrel.gov](mailto:buildingsUP@nrel.gov)

# Explore the Residential Program Guide

Resources to help improve your program and reach energy efficiency targets:

- [Handbooks](#) - explain *why* and *how* to implement specific stages of a program.
- [Quick Answers](#) - provide answers and resources for common questions.
- [Proven Practices](#) posts - include lessons learned, examples, and helpful tips from successful programs.
- [Technology Solutions](#) **NEW!** - present resources on advanced technologies, **HVAC & Heat Pump Water Heaters**, including installation guidance, marketing strategies, & potential savings.
- [Health + Home Performance Infographic](#) – spark homeowner conversations.



<https://rpssc.energy.gov>

# Health + Home Performance Infographic



DOE’s new Health + Home Performance Infographic reveals the link between efficiency and health – something everyone cares about. Efficiency programs and contractors can use the question-and-answer format to discover a homeowner’s needs.

The infographic is ideal for the “kitchen table” conversations where people decide what to do – and who they want to do it. It also has links for homeowners to find a qualified contractor if they do not already have one.

[Download](#) this infographic from DOE’s Better Buildings Residential Network.

Looking for photos to help tell your energy efficiency story? Visit our image libraries:  
<https://www.energy.gov/eere/better-buildings-residential-network/articles/image-libraries>



# Thank You!

Follow us to plug into the latest Better Buildings news and updates!



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Please send any follow-up questions  
or future call topic ideas to:  
[bbresidentialnetwork@ee.doe.gov](mailto:bbresidentialnetwork@ee.doe.gov)